

# **AVERAGE WEEKLY EARNINGS, AUSTRALIA, AUGUST 1993 PRELIMINARY**

NOTE: Trend estimates appear in this issue of the publication for the first time. Selected seasonally adjusted series are available on request.

## **MAIN FEATURES**

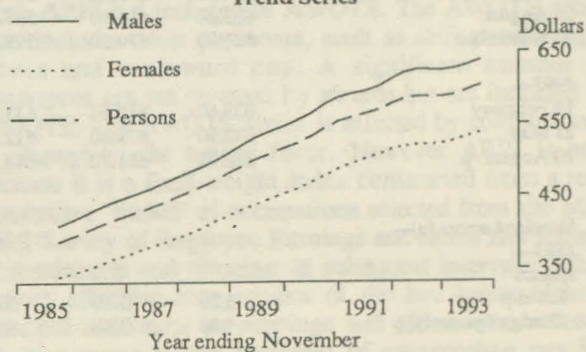
	<i>Full-time adult average weekly ordinary time earnings</i>			<i>Full-time adult average weekly total earnings</i>			<i>All employees average weekly total earnings</i>		
	<i>Change (%)</i>			<i>Change (%)</i>			<i>Change (%)</i>		
	<i>May 1993 to Aug. 1993</i>	<i>Aug. 1992 to Aug. 1993</i>		<i>May 1993 to Aug. 1993</i>	<i>Aug. 1992 to Aug. 1993</i>		<i>May 1993 to Aug. 1993</i>	<i>Aug. 1992 to Aug. 1993</i>	
	(\$)			(\$)			(\$)		
<b>TREND ESTIMATES</b>									
Males	639.00	+1.0	+2.2	685.60	+0.9	+2.7	620.00	+1.1	+3.4
Females	539.20	+1.1	+3.6	551.50	+1.1	+3.6	415.00	+1.5	+4.1
Persons	603.70	+1.0	+2.7	638.10	+0.9	+3.1	525.60	+1.3	+3.9
<b>ORIGINAL ESTIMATES</b>									
Males	636.70	+0.6	+2.2	681.70	+0.3	+2.5	614.70	+0.4	+2.9
Females	536.50	+0.7	+3.4	548.30	+0.5	+3.4	412.20	+1.4	+3.7
Persons	600.80	+0.5	+2.6	633.90	+0.2	+2.8	520.30	+0.5	+3.3

## *Notes on the estimates*

The movement in the trend estimates for most categories of earnings have shown a steady growth since February of this year. The diagram illustrates this trend for full-time adult ordinary time earnings for males and females.

The only statistically significant movement in the estimates between May 1993 and August 1993 was for average weekly earnings for all females, which rose 1.4 percent.

**AVERAGE WEEKLY ORDINARY TIME EARNINGS  
OF FULL-TIME ADULT EMPLOYEES, AUSTRALIA**  
Trend Series



**IAN CASTLES**  
Australian Statistician

## **INQUIRIES**

- for further information about statistics in this publication and the availability of related unpublished statistics, contact Peter Greenfield on Perth (09) 323 5304.
- for information about other ABS statistics and services please refer to the back page of this publication.



## AVERAGE WEEKLY EARNINGS OF EMPLOYEES, AUSTRALIA

Reference period - pay period ending on or before	Males			Females			Persons		
	Full-time adults		All males	Full-time adults		All females	Full-time adults		All employees
	Ordinary time earnings	Total earnings	Total earnings	Ordinary time earnings	Total earnings	Total earnings	Ordinary time earnings	Total earnings	Total earnings
TREND									
— dollars —									
1992—									
15 May	625.20	666.60	598.80	520.70	532.40	398.20	587.90	618.70	505.80
21 August	625.10	667.80	599.50	520.70	532.20	398.50	587.60	619.10	505.60
20 November	624.60	669.50	601.40	522.40	534.30	399.60	588.00	621.10	507.20
1993—									
19 February	627.50	674.20	606.80	527.40	539.60	403.50	591.90	626.30	512.40
21 May	632.80	679.70	613.30	533.20	545.60	408.80	597.50	632.20	518.90
20 August p	639.00	685.60	620.00	539.20	551.50	415.00	603.70	638.10	525.60
Quarterly change to—									
— per cent —									
1993—									
May	0.8	0.8	1.1	1.1	1.1	1.3	0.9	0.9	1.3
August p	1.0	0.9	1.1	1.1	1.1	1.5	1.0	0.9	1.3
Annual change to—									
1993—									
May	1.2	2.0	2.4	2.4	2.5	2.7	1.6	2.2	2.6
August p	2.2	2.7	3.4	3.6	3.6	4.1	2.7	3.1	3.9
ORIGINAL									
— dollars —									
1992—									
15 May	624.80	665.50	597.40	519.70	531.20	397.00	587.30	617.60	504.50
21 August	623.20	664.90	597.70	518.70	530.10	397.40	585.80	616.60	503.90
20 November	623.90	670.30	599.50	520.70	532.90	395.80	586.80	621.00	504.10
1993—									
19 February	628.60	675.60	611.20	530.60	542.80	409.90	593.70	628.30	518.30
21 May	632.90	679.60	612.50	533.00	545.60	406.30	597.80	632.60	517.50
20 August p	636.70	681.70	614.70	536.50	548.30	412.20	600.80	633.90	520.30
Standard errors (a)—									
1993—									
August									
Level p	5.20	5.10	5.40	3.30	3.30	3.80	3.80	3.70	4.00
Change (quarterly) p	3.40	3.80	4.10	2.70	2.80	2.80	2.70	2.90	3.00
Quarterly change to—									
— per cent —									
1993—									
May	0.7	0.6	0.2	0.4	0.5	-0.9	0.7	0.7	-0.2
August p	0.6	0.3	0.4	0.7	0.5	1.4	0.5	0.2	0.5
Annual change to—									
1993—									
May	1.3	2.1	2.5	2.5	2.7	2.4	1.8	2.4	2.6
August p	2.2	2.5	2.9	3.4	3.4	3.7	2.6	2.8	3.3

(a) See paragraphs 18 to 22 of the Explanatory Notes.



## EXPLANATORY NOTES

### Introduction

This publication contains preliminary estimates of average weekly earnings for August 1993 based on information obtained from a sample survey of employers. Final estimates will be published in *Average Weekly Earnings, States and Australia, August 1993* (6302.0).

2. Background information about the average weekly earnings series is provided in *Information Paper: New Statistical Series: Employment, Average Weekly Earnings, Job Vacancies and Overtime* (6256.0) published on 21 June 1984, copies of which are available on request.

### Scope of the survey

3. All wage and salary earners who received pay for the reference period are represented in the survey, except:

- members of the Australian permanent defence forces;
- employees of enterprises primarily engaged in agriculture, forestry, fishing and hunting;
- employees in private households employing staff;
- employees of overseas embassies, consulates, etc.;
- employees based outside Australia; and
- employees on workers' compensation who are not paid through the payroll.

4. Also excluded are the following persons who are not regarded as employees for the purposes of this survey:

- directors who are not paid a salary;
- proprietors/partners of unincorporated businesses; and
- self-employed persons such as subcontractors, owner/drivers, consultants and persons paid solely by commission without a retainer.

### Survey design

5. A sample of approximately 5,000 employers is selected from the ABS register of businesses to ensure adequate State and industry representation. The sample is updated each quarter to reflect changes in the ABS register of business units. These changes arise from the emergence of new businesses, takeovers and mergers, changes to industry classification, changes in the number of employees, and businesses which have ceased operations. Such updating of the register can contribute to changes in the estimates of average weekly earnings.

6. The statistical unit for the survey comprises all activities of an enterprise in a particular State or Territory. Each statistical unit is classified to an industry which reflects the predominant activity of the enterprise in the State or Territory. In a small number of cases where an enterprise has significant employment in more than one industry, a separate statistical unit is created for each industry. The statistical units are stratified by State, public/private sector, industry and size of employment and an equal probability sample is selected from each stratum.

7. Since February 1992 survey data for a number of Commonwealth Government and ACT Government departments have been collected electronically.

### Notes on Estimates

8. Average weekly earnings statistics represent average gross (before tax) earnings of employees and do not relate to average award rates nor to the earnings of the 'average person'. Estimates of average weekly earnings are derived by dividing estimates of weekly total earnings by estimates of employment. Changes in the averages may be affected not only by changes in the level of earnings of employees but also by changes in the overall composition of the employed wage and salary earner segment of the labour force. There are several aspects which can contribute to compositional changes such as variations in the proportions of part-time, casual and junior employees, variations in the occupational distribution within and across industries, variations in the distribution of employment between industries.

### Comparability of results

9. When comparisons are made between period to period movements in average weekly ordinary time earnings (AWOTE) for full-time adults and movements in the Award Rates of Pay Indexes (ARPI) it is important to recognise the different coverage, scope, definitions and methodology used in the construction of each series. In particular, the AWOTE series includes a number of payments additional to award rates of pay used in compiling ARPI. Allowances covered under awards which are not industry or occupation wide in their application such as site, travelling, height and dirt allowances are excluded from ARPI but included in AWOTE. The AWOTE series also includes other payments, such as shift penalty payments and overaward pay. A significant number of employees are not covered by awards but are included in AWOTE. The AWOTE series is affected by compositional change in the labour force. However ARPI is not, because it is a fixed-weight index constructed from a representative 'basket' of occupations selected from the May 1985 Survey of Employee Earnings and Hours and subject to reselection and rebasing at infrequent intervals. Other factors affecting comparisons of the two series include seasonal influences on earnings and differences between the two series in the treatment of retrospective pay increases. A detailed description of the methodology, scope and definitions used in ARPI is published in *Award Rates of Pay Indexes, Australia* (6312.0).

10. It is also important to recognise that whilst average employee earnings can be derived from the Survey of Employment and Earnings (SEE) published in *Employed Wage and Salary Earners, Australia* (6248.0), these average earnings will not be comparable with those produced from the Survey of Average Weekly Earnings (AWE). In the AWE survey, information is obtained relating to a specified pay period, the last pay period ending on or before the third Friday of the middle month of the calendar quarter. The SEE collects the sum of employee earnings paid in all pay periods ending in a calendar



quarter including payments to employees which are excluded from the scope of the AWE survey such as retrospective pay, pay in advance, leave loadings and severance, termination and redundancy payments. Whilst the quarterly earnings produced by the SEE are affected by the varying number of pay periods from quarter to quarter the AWE results are unaffected because of the selection of a specified pay period in the middle of a quarter. The SEE earnings data are also more subject to seasonal variations, particularly in the December and March quarters, due to the incidence of holidays taken in January being paid in advance and the earnings being reported in December quarter figures.

### Historical series

11. The series was introduced in August 1981 when it replaced the average weekly earnings series based principally on information from payroll tax returns. Revised estimates of average weekly earnings for the period August 1981 to November 1983 were included in *Average Weekly Earnings, States and Australia, March Quarter 1984* (6302.0) published on 12 July 1984. Users who need a measure of the movement in earnings for a period which spans both the payroll tax based and employer survey series should refer to Table 3 in that publication which presents both series linked to a common index base (August 1981 = 100).

### Trend Estimates

12. The ABS considers that trend estimates provide a more reliable guide to the underlying direction of the data, and are more suitable than either the seasonally adjusted or original data for most business decisions and policy advice.

13. The ABS has not published seasonally adjusted AWE series in the past. The AWE series have now been examined to determine the influence of seasonal factors but it has been found that they exhibit very little seasonality. Consequently, seasonally adjusted AWE series have not been published but are calculated as part of the process for determining trend estimates. The seasonally adjusted series are available on request to the ABS.

14. The trend estimates in this publication, obtained by dampening out the irregular component from the seasonally adjusted series, are calculated using a centred 7-term Henderson moving average of the seasonally adjusted series. Estimates for the three most recent quarters cannot be calculated using this centred average method; instead an asymmetric average is used. This can lead to revisions in the trend estimates for the last three quarters when data become available for later quarters. Revisions of trend estimates will also occur with revisions to the original data and re-estimation of seasonal adjustment factors. The seasonal factors will be revised annually.

15. Seasonal adjustment is a means of removing the estimated effect of normal seasonal variation from the series so that the effects of other influences can be more clearly recognised. Seasonal adjustment does not remove the irregular or non-seasonal influences which may be present in any particular period. Volatile or unsystematic influen-

ces may still affect the interpretation of movement in the series, even after adjustment for seasonal variation.

16. If a series is highly volatile then the trend estimates will be subject to greater revision for the latest few quarters as data become available. However, it is important to note that this does not make the trend series inferior to the seasonally adjusted or original series. In some cases the effect of the irregular component on overall movements will remain in the seasonally adjusted and the original estimates but not in the trend series.

17. For more information about ABS procedures for deriving trend estimates and analysis of advantages of using them over alternative techniques for monitoring trends, refer to the ABS Information Papers:

- *A guide to Interpreting Time Series - Monitoring 'Trends': an Overview* (1348.0);
- *A Guide for Smoothing Series - Estimates of 'Trend'* (1316.0); and
- *Time Series Decomposition - An Overview* (1317.0).

Two feature articles which have appeared in the ABS monthly publication *Australian Economic Indicators* may also be of interest:

- *Picking Turning Points in the Economy* (April 1991); and
- *Smarter Data Use* (March 1992).

### Reliability of estimates

18. As the estimates in this publication are based on information relating to a sample of employers rather than a full enumeration, they are subject to sampling variability. That is, they may differ from the estimates that would have been produced if the information had been obtained from all employers. This difference, called *sampling error*, should not be confused with inaccuracy that may occur because of imperfections in reporting by respondents or in processing by the ABS. Such inaccuracy is referred to as *non-sampling error* and may occur in any enumeration whether it be a full count or sample. Efforts have been made to reduce non-sampling error by careful design of questionnaires, detailed checking of returns and quality control of processing.

19. The sampling error associated with any estimate can be estimated from the sample results. One measure of sampling error is given by the *standard error* which indicates the degree to which an estimate may vary from the value that would have been obtained from a full enumeration (the 'true' figure). There are about two chances in three that a sample estimate differs from the true value by less than one standard error, and about nineteen chances in twenty that the difference will be less than two standard errors.

20. An example of the use of a standard error is as follows. If the estimated average earnings was \$500.00 with a standard error of \$4.00, then there would be about two chances in three that a full enumeration would have given an estimate in the range \$496.00 to \$504.00 and about



nineteen chances in twenty that it would be in the range \$492.00 to \$508.00.

21. An example of the use of a standard error for a quarterly change estimate is as follows. If the estimated standard error for a quarterly change estimate of average weekly earnings was \$1.00 and the quarterly change estimate between two quarters was \$1.50, then there would be about two chances in three that a full enumeration would have given a quarterly change estimate in the range +\$0.50 to +\$2.50 and about nineteen chances in twenty that it would be in the range -\$0.50 to +\$3.50.

22. Quarterly movements in estimates of average weekly earnings are considered to be statistically significant where they exceed two standard errors.

#### Related publications

23. Users may also wish to refer to the following publications which are available on request:

*Average Weekly Earnings, States and Australia* (6302.0)—issued quarterly

*Average Weekly Earnings of Employees, Australia* (6304.0)—issued annually

*Distribution and Composition of Employee Earnings and Hours, Australia* (6306.0)—issued annually

*Job Vacancies and Overtime, Australia* (6354.0)—issued quarterly

*Employed Wage and Salary Earners, Australia* (6248.0)—issued quarterly

*Information Paper: New Statistical Series: Employment, Average Weekly Earnings, Job Vacancies and Overtime* (6256.0)—issued June 1984

*Average Weekly Earnings, Australia 1941-1990* (6350.0)—issued February 1992

*Occasional Paper No. 1986/1: Statistics on Wages, Earnings, Income and Labour Costs—A Guide to Their Concepts, Measurement and Usage*

*Award Rates of Pay Indexes, Australia* (6312.0)—issued monthly

*The Labour Force, Australia* (6203.0)—issued monthly.

*Labour Force Projections, Australia 1992-2005* (6260.0)

24. Current publications produced by the ABS are listed in the *Catalogue of Publications and Products, Australia* (1101.0). The ABS also issues, on Tuesdays and Fridays, a *Publications Advice* (1105.0) which lists publications to be released in the next few days. The Catalogue and Publications Advice are available from any ABS office.

#### Unpublished statistics

25. In some cases, the ABS can also make available information which is not published. This information may be made available in one or more of the following forms: microfiche, photocopy, data tape, floppy disk, computer printout or clerically extracted tabulation. Generally, a charge is made for providing unpublished information. Inquiries should be made to the contact officer or Information Services in the nearest ABS office.

#### Symbols and other usages

p preliminary

26. The estimates of average weekly earnings are rounded to the nearest 10 cents.

27. Percentage changes are calculated on the actual values and may differ from calculations based on rounded estimates.

#### Forthcoming Issues

28. The following table shows the dates on which catalogue numbers 6301.0 and 6302.0 are expected to be released.

ISSUE		EXPECTED RELEASE DATE
1993	August 6302.0 (States and Australia)	18 November 1993
1993	November 6301.0 (Australia, Preliminary)	10 February 1994
1993	November 6302.0 (States and Australia)	3 March 1994



## APPENDIX A: GLOSSARY

*Weekly ordinary time earnings* refers to one week's earnings of employees for the reference period attributable to award, standard or agreed hours of work. It is calculated before taxation and any other deductions (e.g. superannuation, board and lodging) have been made. Included in ordinary time earnings are award payments, base rates of pay, overaward payments, penalty payments, shift and other allowances; commissions and retainers; bonuses and similar payments related to the reference period; payments under incentive or piecework; payments under profit-sharing schemes normally paid each pay period; payments for leave taken during the reference period; all workers' compensation payments made through the payroll; and salary payments made to directors. Excluded are overtime payments, retrospective pay, pay in advance, leave loadings, severance, termination and redundancy payments and other payments not related to the reference period.

2. *Weekly total earnings* of employees is equal to weekly ordinary time earnings plus weekly overtime earnings.

3. *Average weekly earnings* statistics represent average gross (before tax) earnings of employees and do not relate to average award rates nor to the earnings of the 'average person'. Estimates of average weekly earnings are derived by dividing estimates of weekly total earnings by estimates of employment. Changes in the averages may be affected not only by changes in the level of earnings of employees but also by changes in the overall composition of the employed wage and salary earner segment of the labour force. There are several aspects which can contribute to compositional changes such as variations in the proportions of part-time, casual and junior employees,

variations in the occupational distribution within and across industries, variations in the distribution of employment between industries and variations in the proportions of males and females.

4. *Employees* refers to all wage and salary earners (as defined in paragraph 3 of the Explanatory Notes) who received pay for any part of the reference period.

5. *Full-time employees* are permanent, temporary and casual employees who normally work the agreed or award hours for a full-time employee in their occupation and received pay for any part of the reference period; if agreed or award hours do not apply, employees are regarded as full-time if they ordinarily work 35 hours or more per week.

6. *Adult employees* are those employees 21 years of age or over and those employees who, although under 21 years of age, are paid at the full adult rate for their occupation.

7. *Reference period* for the survey refers to the last pay period ending on or before the third Friday of the middle month of the quarter. The reference date for the current survey is 20 August 1993.

8. *Sector*. Public sector includes all local government authorities and government departments, agencies and authorities created by, or reporting to the Commonwealth and State Parliaments. All remaining employees are classified as private sector.